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September 2000

SUPPLEMENT to the SERVICE MANUAL

for

Kodak Miniloader 2000

and

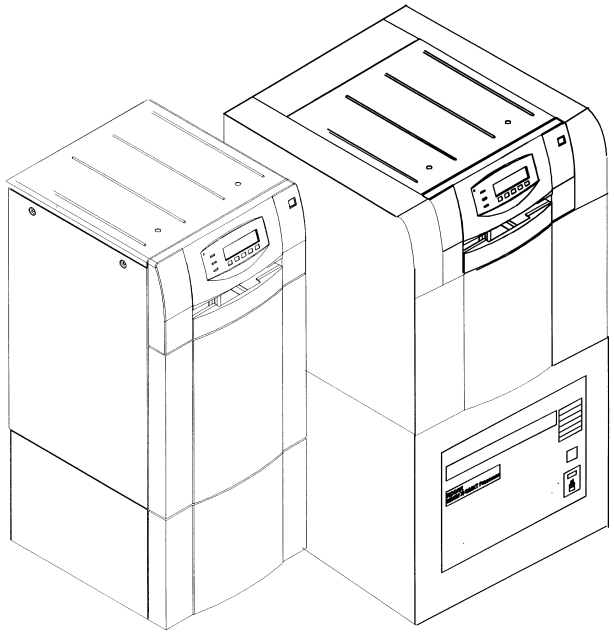
Kodak Miniloader 2000P

SVC's. 3477 – 3479

with

Lightweight Magazine Compatibility

FOR THE USE OF TRAINED SERVICE PERSONNEL ONLY



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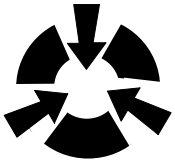

NOTE
This equipment includes parts and assemblies sensitive to damage from electrostatic discharge.
Use caution to prevent damage during all service procedures.

Purpose:

This Document shows the changes in adjustment procedure and maintenance that are necessary for the up-dated versions of the Kodak Miniloader 2000 and Kodak Miniloader 2000P.

It is not intended that it should be used without referring to SM 3477 6/97 or above and must be used in conjunction with SM 3477 6/97 or above.

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ML2000P with FILM FLIP MECHANISM ASSEMBLY

Removal of the FILM FLIP MECHANISM ASSEMBLY

NOTE:
In order to carry out any maintenance of the FILM POCKET AREA it will be necessary to remove the "FILM FLIP MECHANISM ASSEMBLY" (FFMA)

WARNING
Disconnect (ISOLATE) the Miniloader 2000P from the Mains Power (either Mains Plug or Wall-mounted Circuit Breaker) before attempting to adjust , install or remove the Film Flip Mechanism Assembly (FFMA) .

1. Remove covers: Top, Left Hand, Right Hand and Rear.

2. Locate FLIP CHAMBER and Remove (2) two Securing Screws from front of CHAMBER

3. Remove Flip Chamber

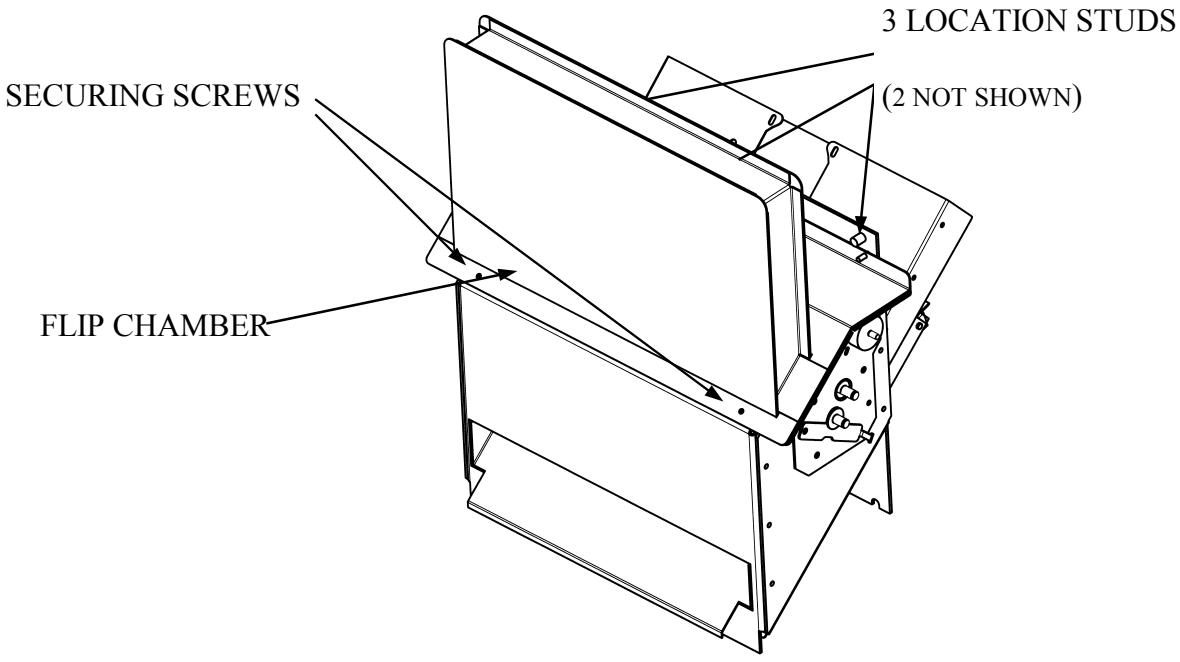


Figure 1

4. Disconnect the 4 Cables from the LEFT HAND side of the FFMA

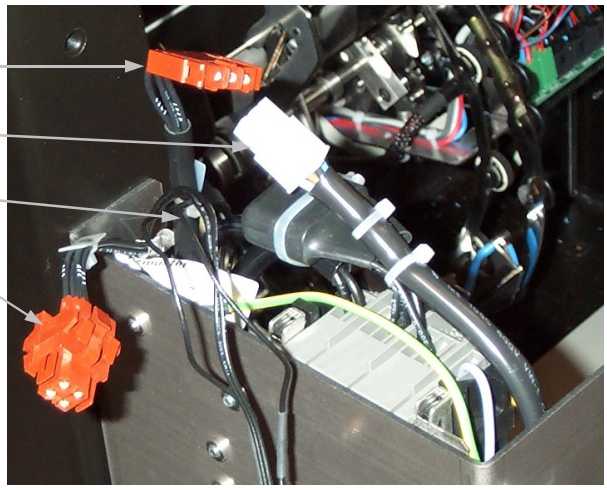


Figure 2

5. Locate the Two Mounting Screws for the FFMA

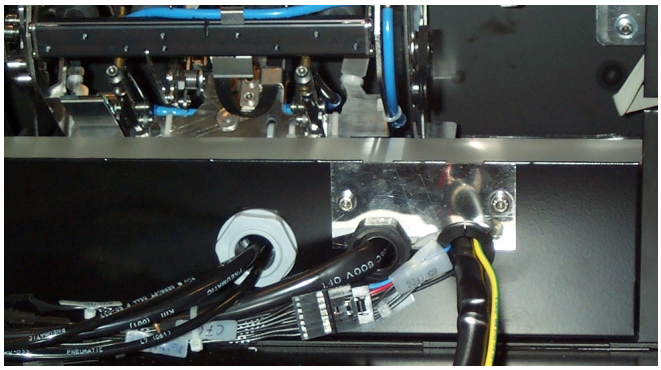
6. While supporting the weight of the FFMA loosen the two screws

7. Carefully remove the FFMA from the aperture in the INNER REAR PANEL, it will be necessary to turn it slightly to enable the FFMA to pass through the aperture and clear the hoses of the PNEUMATIC UNIT.

8. For ease of access to the FILM POCKET it may be necessary to remove the INNER REAR PANEL.

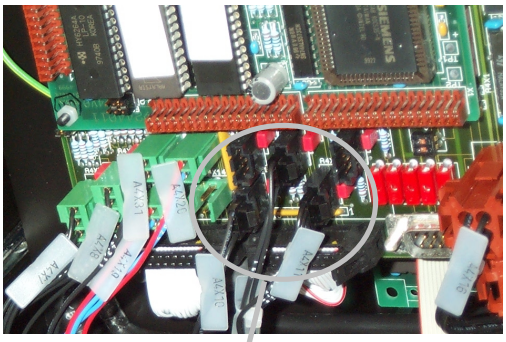
Adjustment to WIRING during fault Investigation

WARNING:
It is important that the Insulation on all Cables is left intact (not cut or damaged) as the power cable runs close to low voltage cables.



Adjustment to WIRING during fault Investigation (cont…)

WARNING: Make sure that the loop from the Primary Harness to A4 x 24 is kept short so as not to touch any LOW VOLTAGE CABLES or LOW VOLTAGE COMPONENTS on either the PCB A8 or PCB A4 when the "E" Box FLAP is down for servicing or in the UP position. Or while being moved to either position.

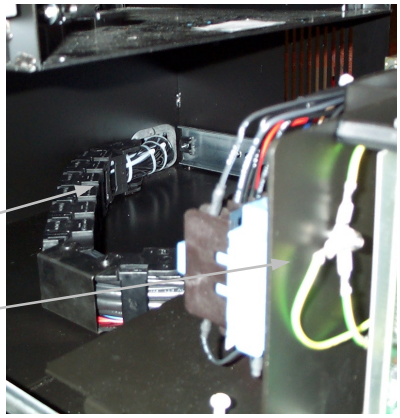


A4 TAG area

WARNING:
If it is necessary to temporarily remove the Power cable to the Flip Motor, ensure that the motor cable runs in the middle of the Power Chain and not close to the top or bottom. After re-positioning always re-check the Cable.

This is IMPORTANT so as to avoid any risk of the cable chaffing against the frame.

Re-secure with cable ties every other link of the POWER CHAIN

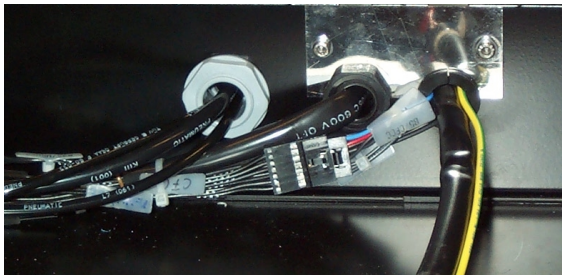


Power Chain

"E" Box

WARNING:
Ensure that the cables after re-positioning do not touch any moving parts such as the Film Pocket, Elevator Weights or Guide Rail.

NOTE:
View below shows cable exit at CABLE DUCT



Replacement of the FFMA

9. Replace UNIT by following steps 1 to 7 in reverse order.

WARNING: Take care to re-locate the FFMA on both of the Location Spigots and avoid pinching the Tubes of the PNEUMATIC UNIT while re-installing.

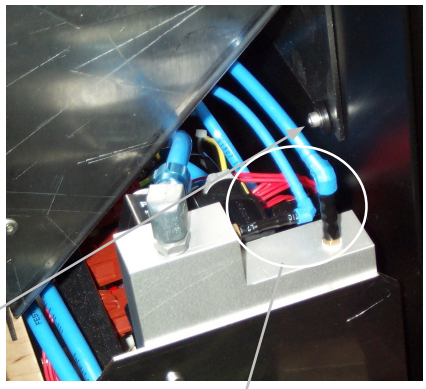
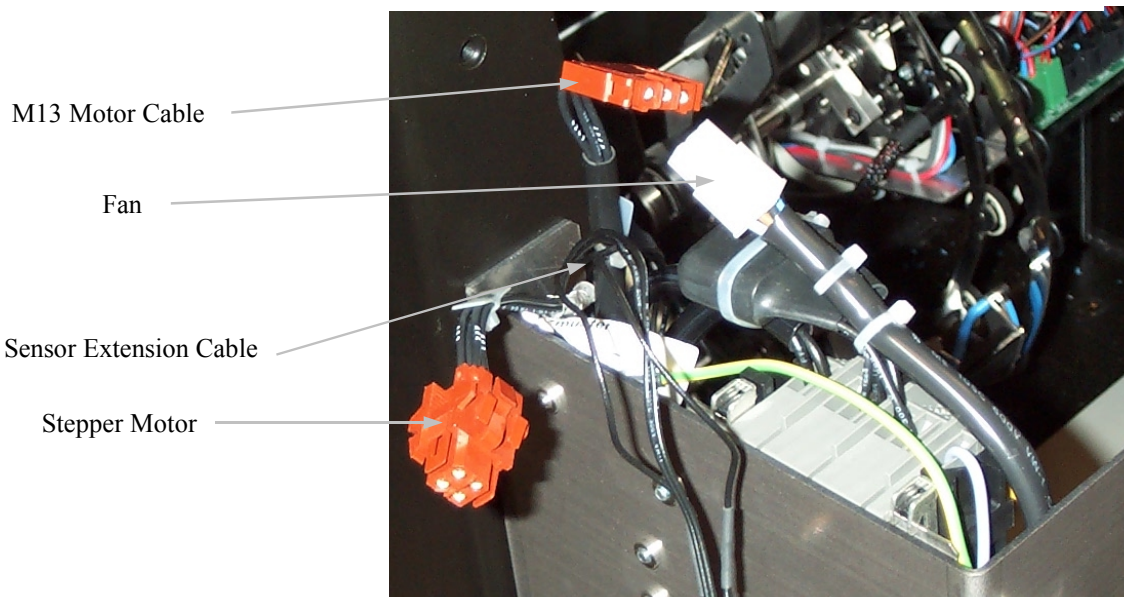
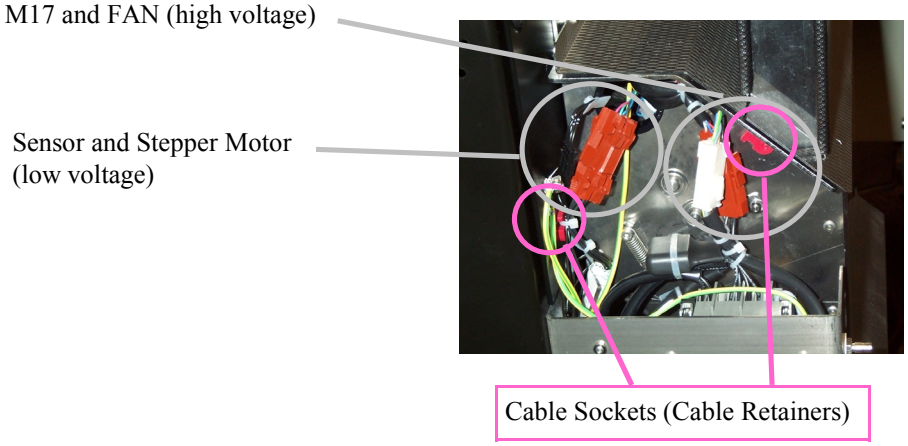


Figure 3

WARNING:
Do NOT allow CABLE LOOPS outside the REAR PANEL, if necessary pull back the CABLE into the DUCT.



WARNING:
For SAFETY reasons, ensure that the connectors and wires external to the INSULATING TUBE of M17
and Fan can not touch the
LOW VOLTAGE Sensor and Stepper Motor cables or connectors.
After connection fix the wires and cables to the correct Cable Socket
HIGH Voltage together LOW Voltage together



Adjustment of the FLAP MOTOR position on the FFMA

10. Follow the procedure for removing the FFMA in steps 1 to 7.

11. LOCATE Flap Motor

12. ROTATE Flap Motor by hand until the Maximum Height is reached by the FLAP.

13. Ensure that there is a GAP of 1 to 1.5 mm between the FLAP and the BOTTOM ROLLER. Adjust MOTOR M17 if necessary.

REFER to:
Diagram Next Page

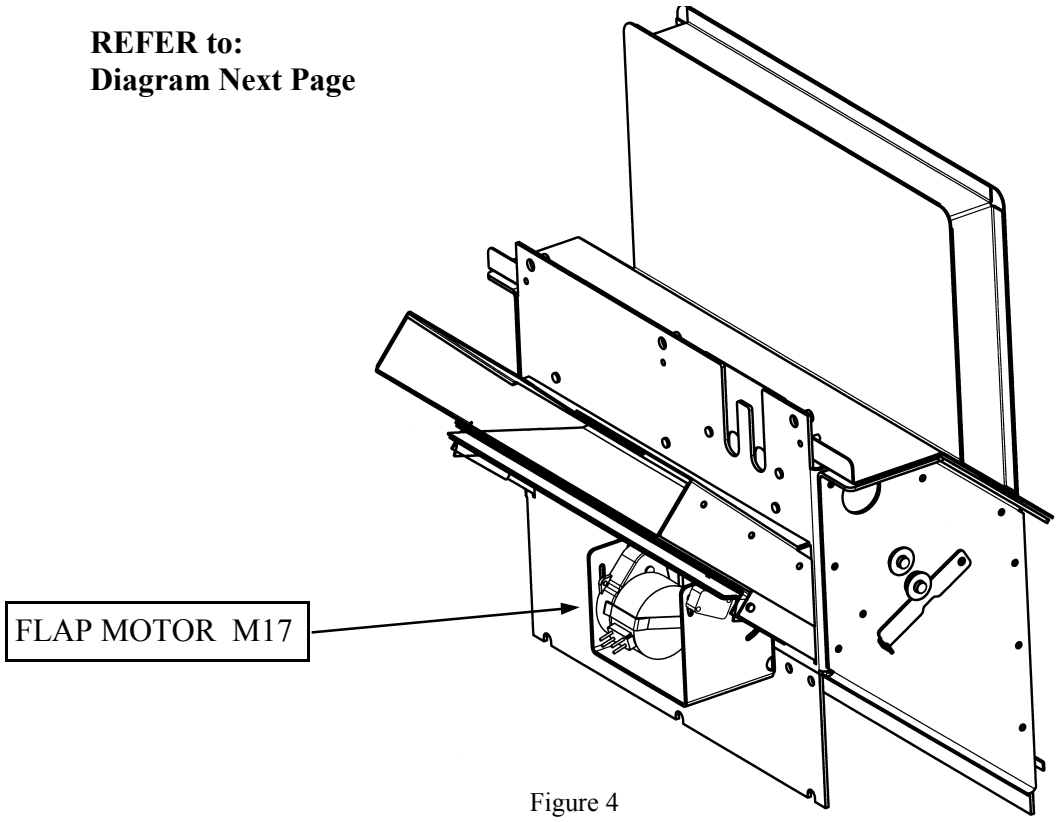


Figure 4

Adjustment of the FLAP MOTOR position on the FFMA

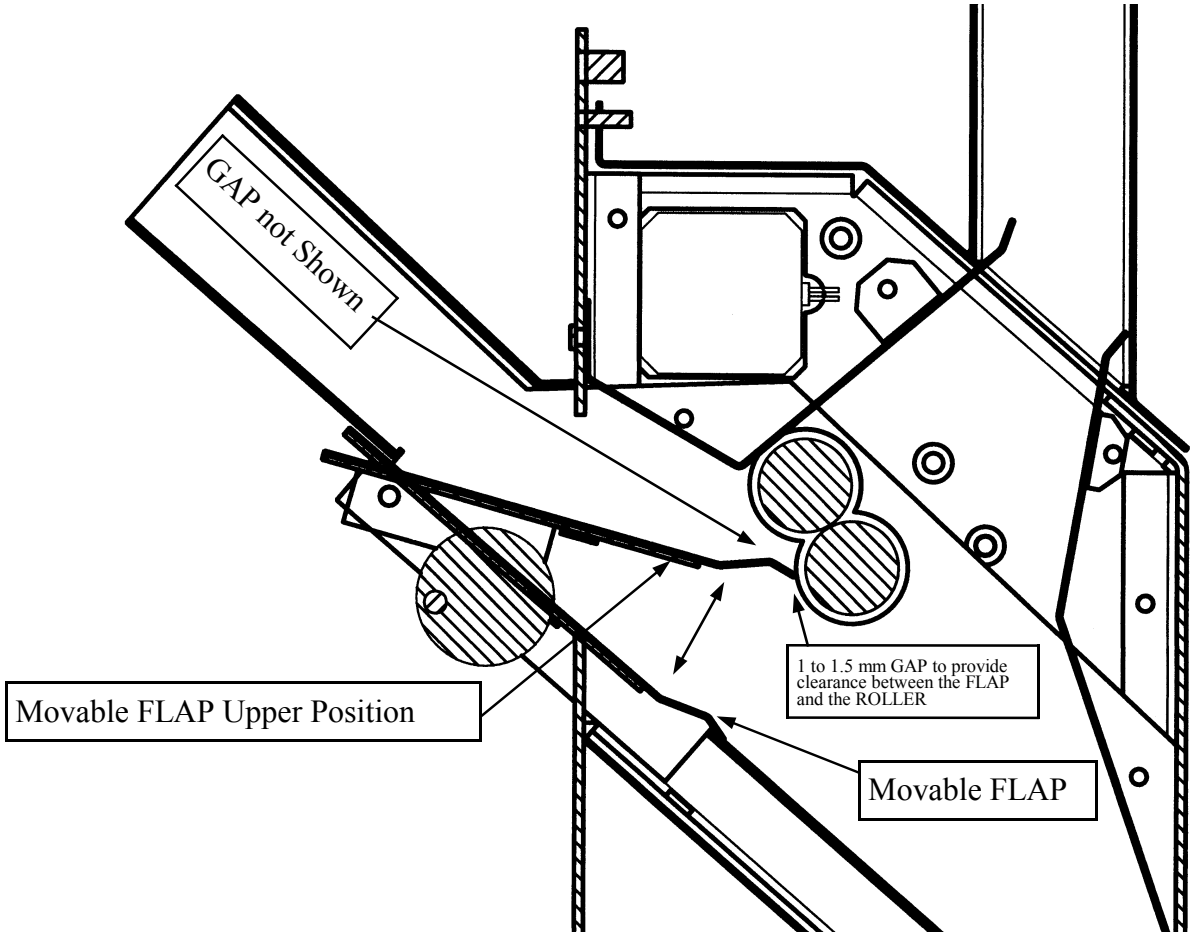

GAP not Shown
1 to 1.5 mm GAP to provide clearance between the FLAP and the ROLLER
Movable FLAP Upper Position
Movable FLAP

Figure 5

14. Please ensure that fastenings on MOTOR BRACKET are tightened following adjustment of GAP. Check that Switches B101 and B100 are adjusted to enable FLAP to be positioned correctly at each position (Upper and Lower).

NOTE:
The GAP of 1 to 1.5 mm is to provide clearance between the ROLLER and the MOVABLE FLAP when the FILM passes through the pair of ROLLERS and separates them. If the Movable FLAP is too close to the ROLLER it will interfere with the transport of the FILM.

Electrical Safety

After any adjustment procedure or maintenance check the electrical safety of the final assembly, use a Safety Tester to check the following:

a.) Ground resistance test <0.1 Ohm between the power cord ground conductor and the following components:

- all metal parts of the Film Flip Mechanism Assembly

- all metal parts of the Drawer Assembly

- AC – FLAP Motor

b.) Insulation resistance test > 2 MOhm

Ensure that all panels are reliably grounded and correctly mounted

ML2000 with Lightweight Magazine Compatibility

Main Changes to ML2000 with Lightweight Magazine Compatibility

WARNING
Disconnect (ISOLATE) the Miniloader 2000 from the Mains Power (either Mains Plug or Wall-mounted Circuit Breaker) before attempting to adjust , install or remove the Receive Magazine Drawer Assembly.

DRAWER ASSEMBLY

New Drawer Assembly (showing Lightweight Magazine in drawer)

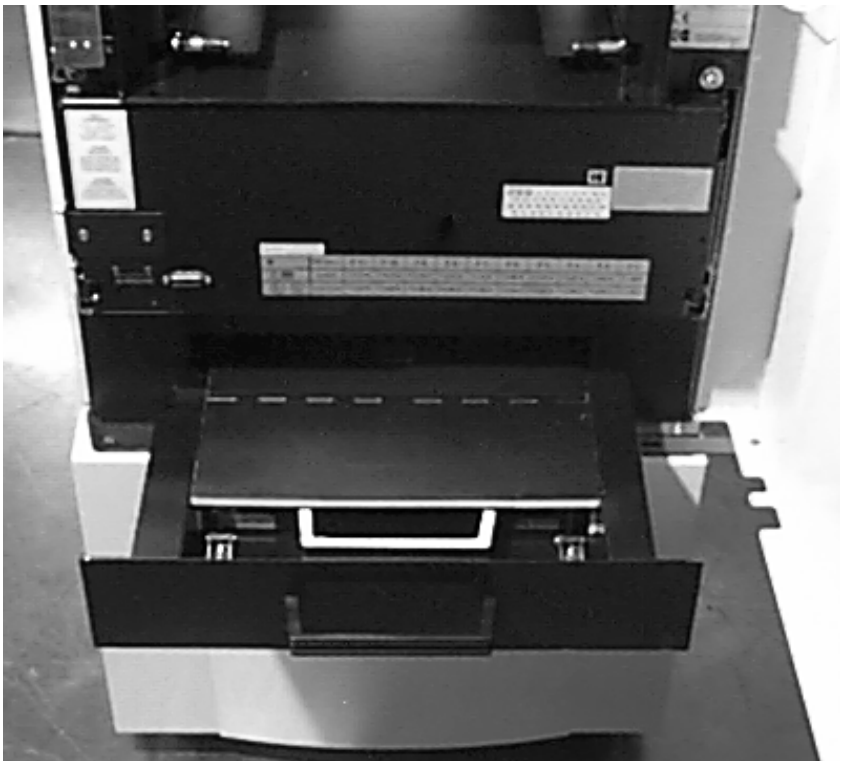


Figure 6

Changes to Film Receiving Drawer and The Rear Film Chute

New Drawer Assembly

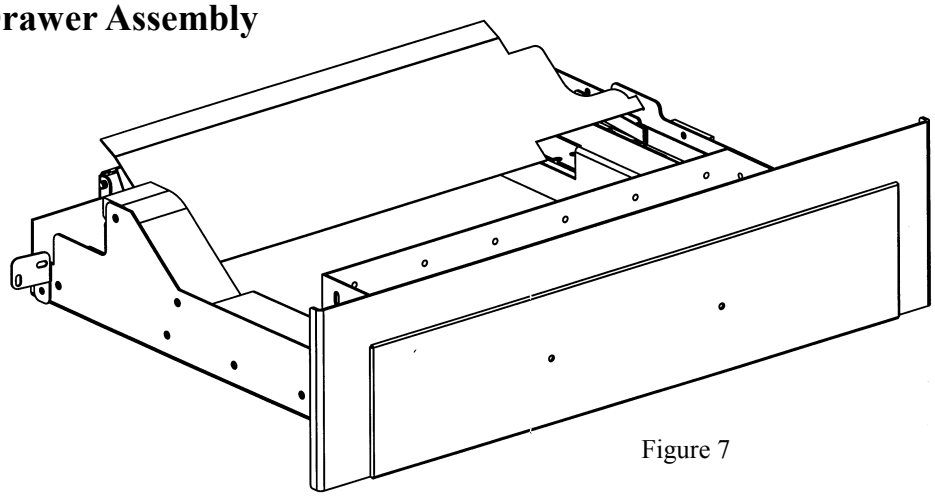
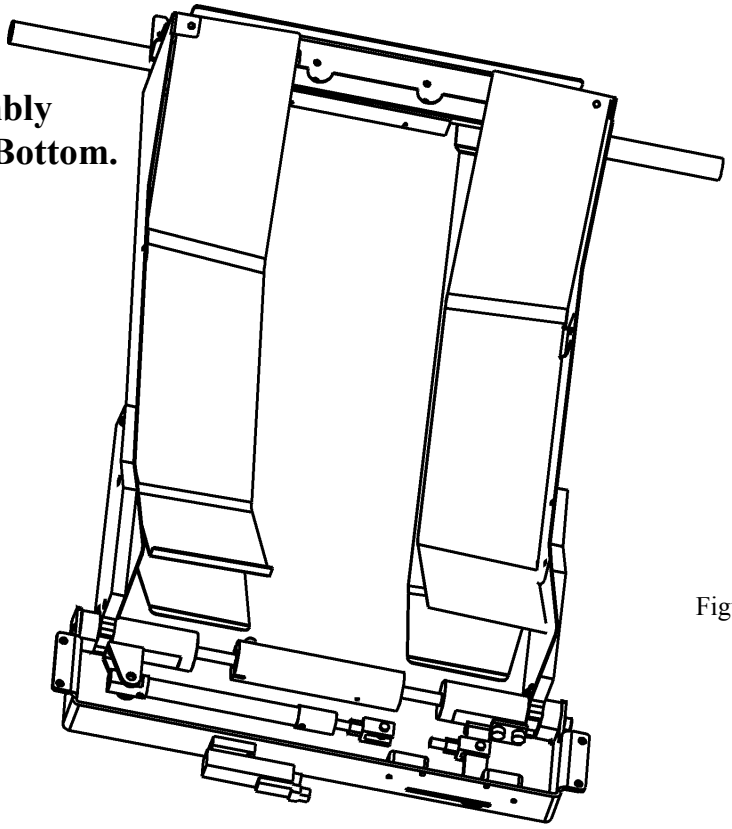


Figure 7

New Chute Assembly view from Chute Bottom.



View from Film Pocket

Figure 8

New Chute Assembly

New Chute Assembly (showing components)

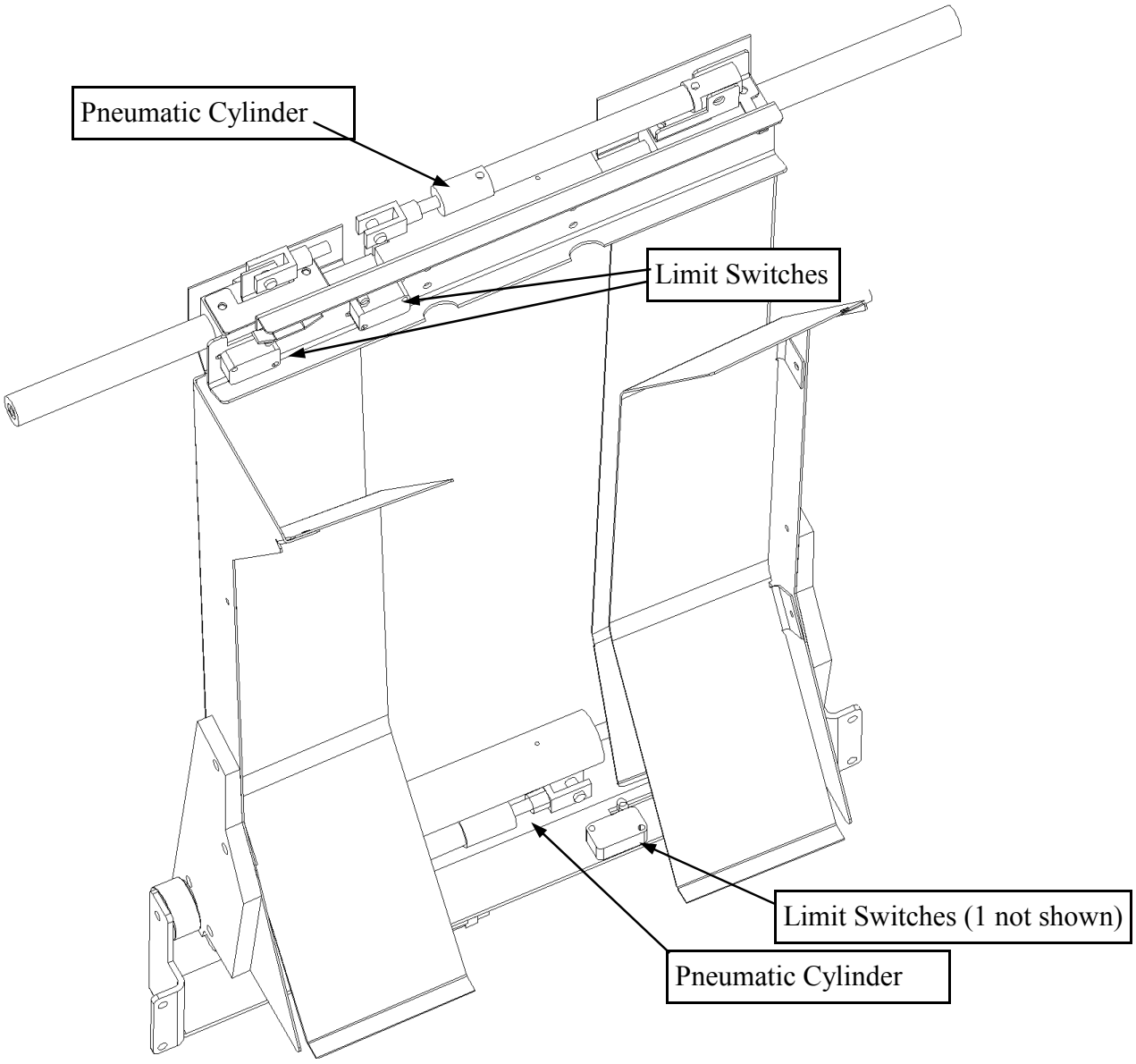


Figure 9

Removal of New Chute Assembly

Removal of new Chute Assembly in order to carry out necessary work and MAINTENANCE to the FILM POCKET and MAGAZINE AREA

15. Remove the REAR PANEL from the Miniloader 2000

16. Locate LEFT and RIGHT sections of MOVABLE CHUTE and one at a time, carefully slide KEYHOLE SLOT over and away from LOCATION BOLTS. Lift bottom of CHUTE away from AIR CYLINDER mechanism (The same as previous version).

17. Replace in REVERSE order

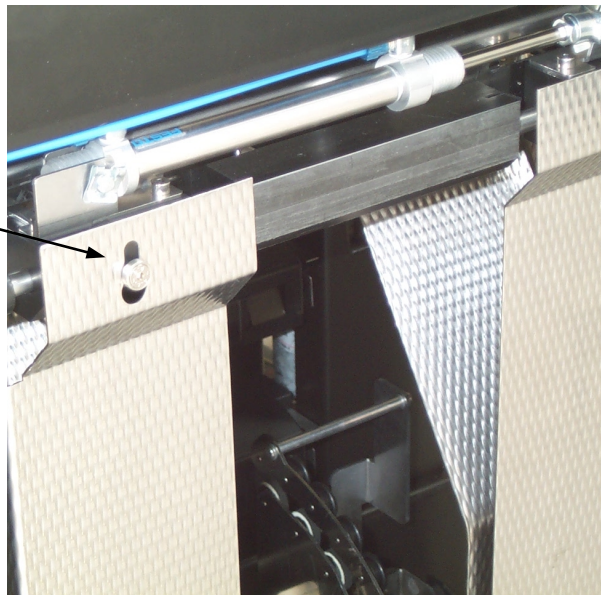
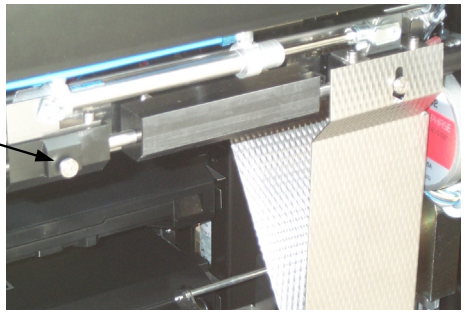


Figure 10



Right Hand LOCATION Viewed from back of Miniloader with section of Chute removed.

Figure 11

Changes to DRAWER ASSEMBLY

Section through Drawer Assembly showing position of Static Guide and Movable Guide.

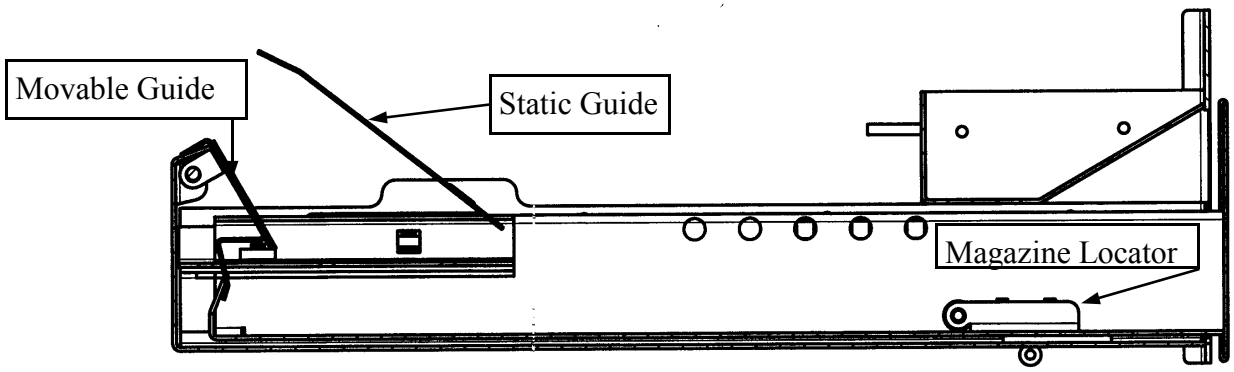


Figure 11

Top (plan) View of Lightweight Receive Magazine drawer showing Magazine Opening Cam and Light Trap assembly.

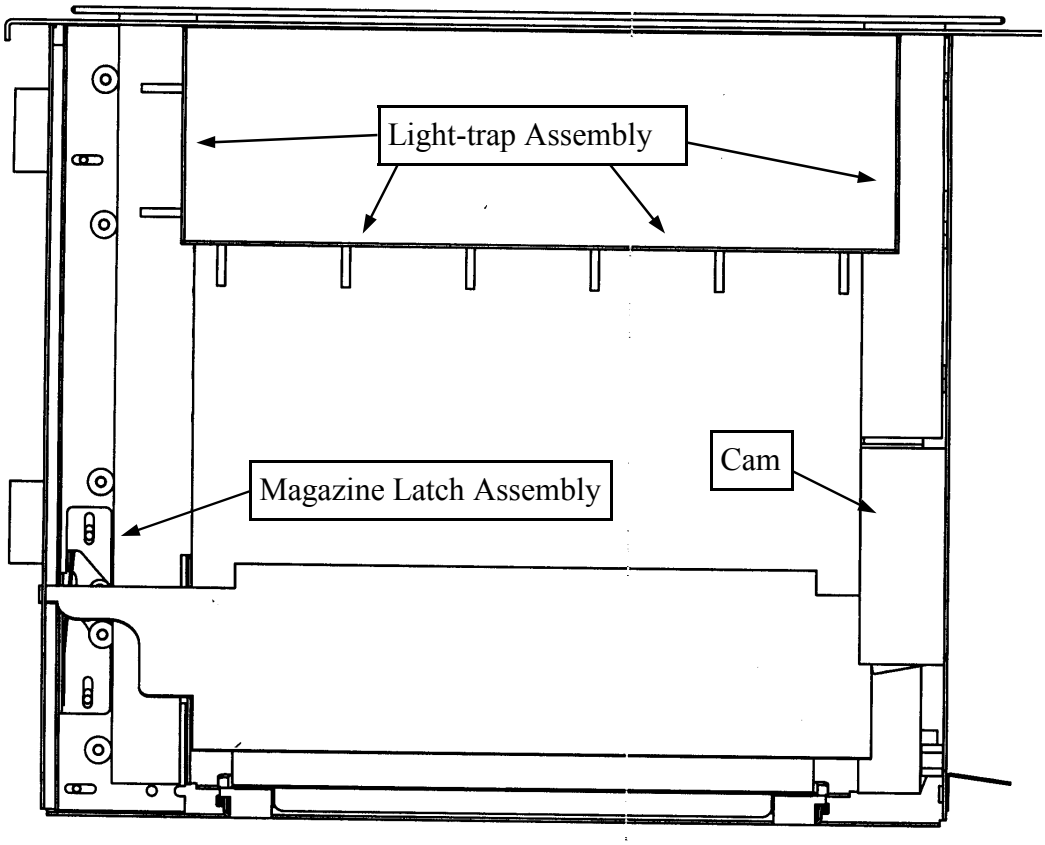
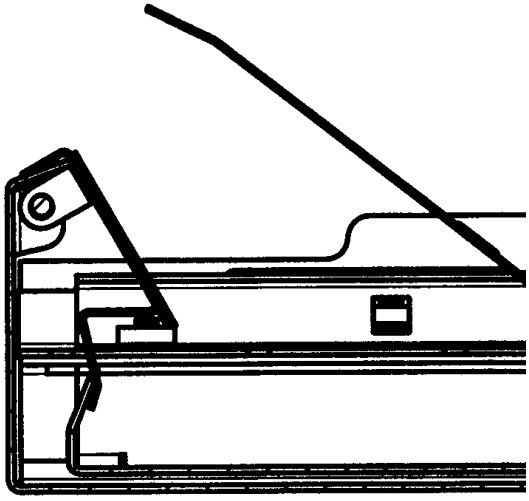


Figure 12

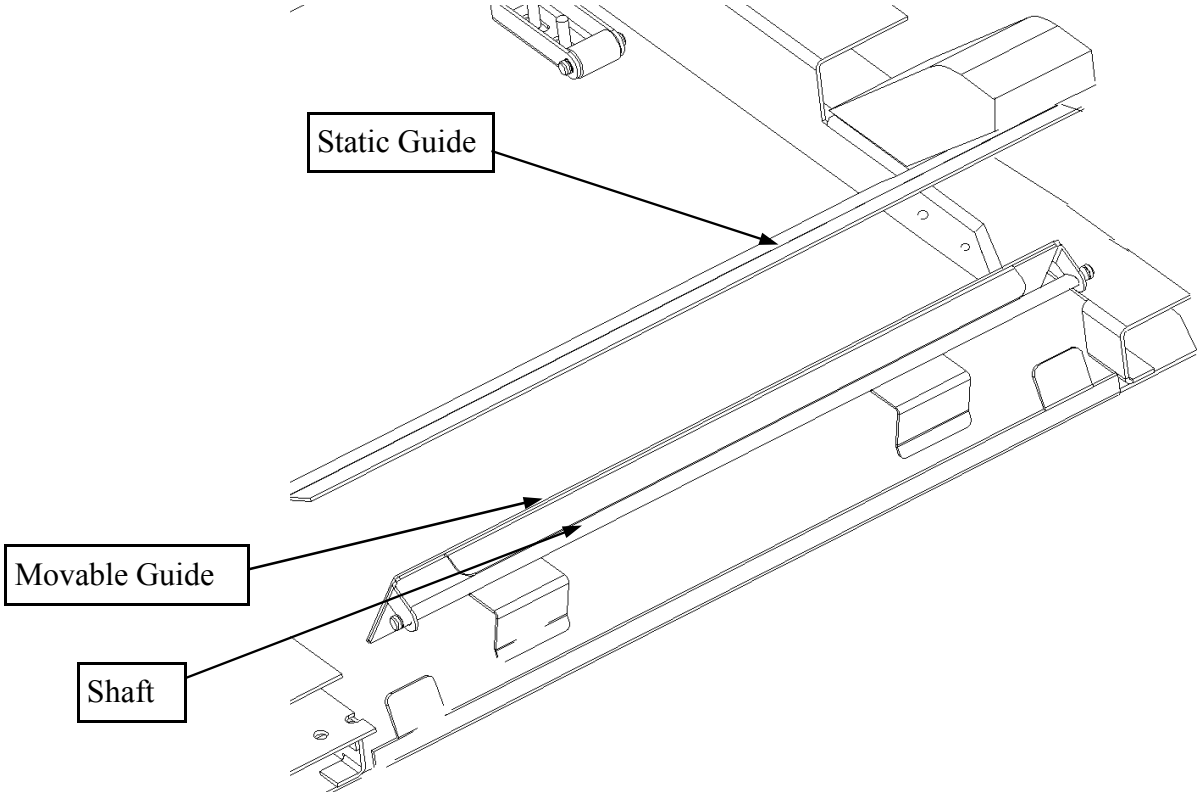
MOVABLE GUIDE

The function of the MOVABLE GUIDE is to guide the film into the MAGAZINE.

The guide moves downwards over the edge of the MAGAZINE as the MAGAZINE DRAWER is closed



NOTE:
Servicing of the MOVABLE GUIDE must be carried out after REMOVING the DRAWER ASSEMBLY



Section through Drawer Assembly showing position of Magazine Coding Photocell (Sensors)

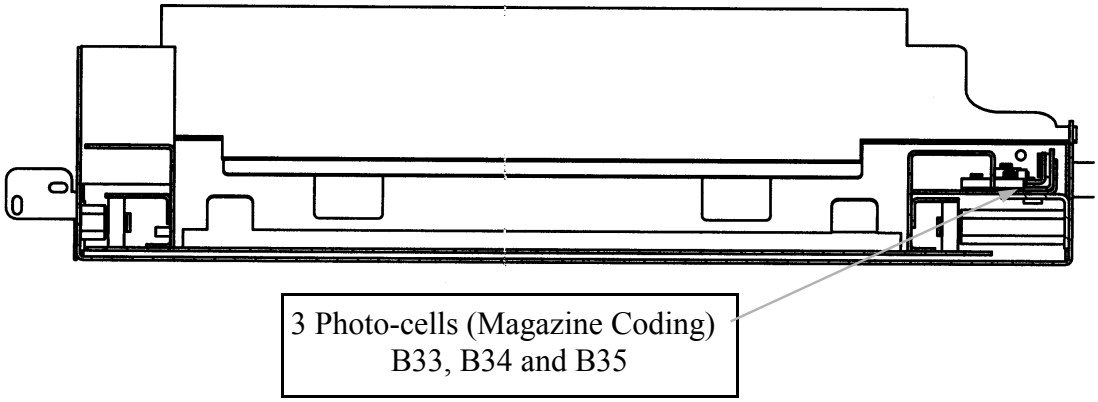


Figure 13

Location of Magazine Drawer COMPONENTS

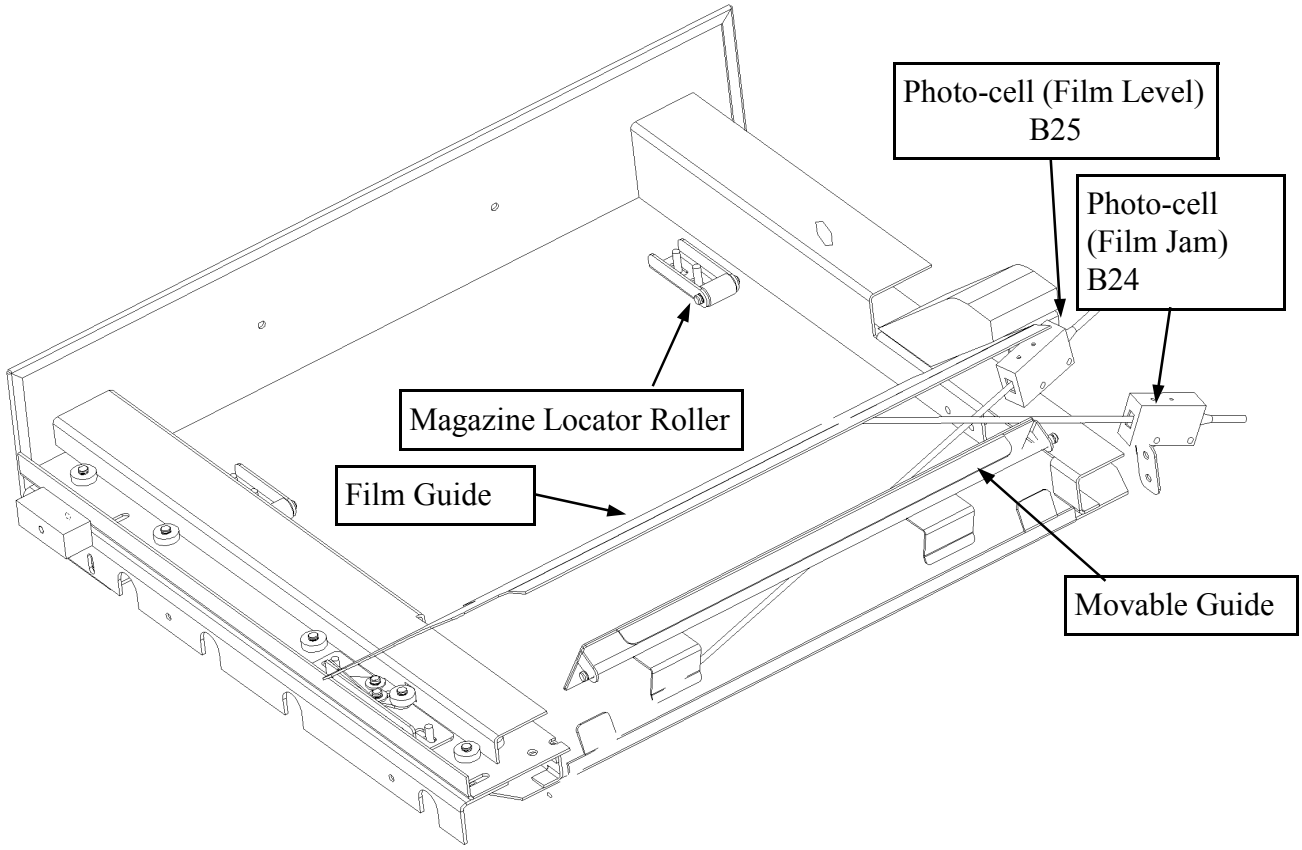


Figure 14

VIEW of RIGHT HAND corner of MINILOADER 2000 DRAWER

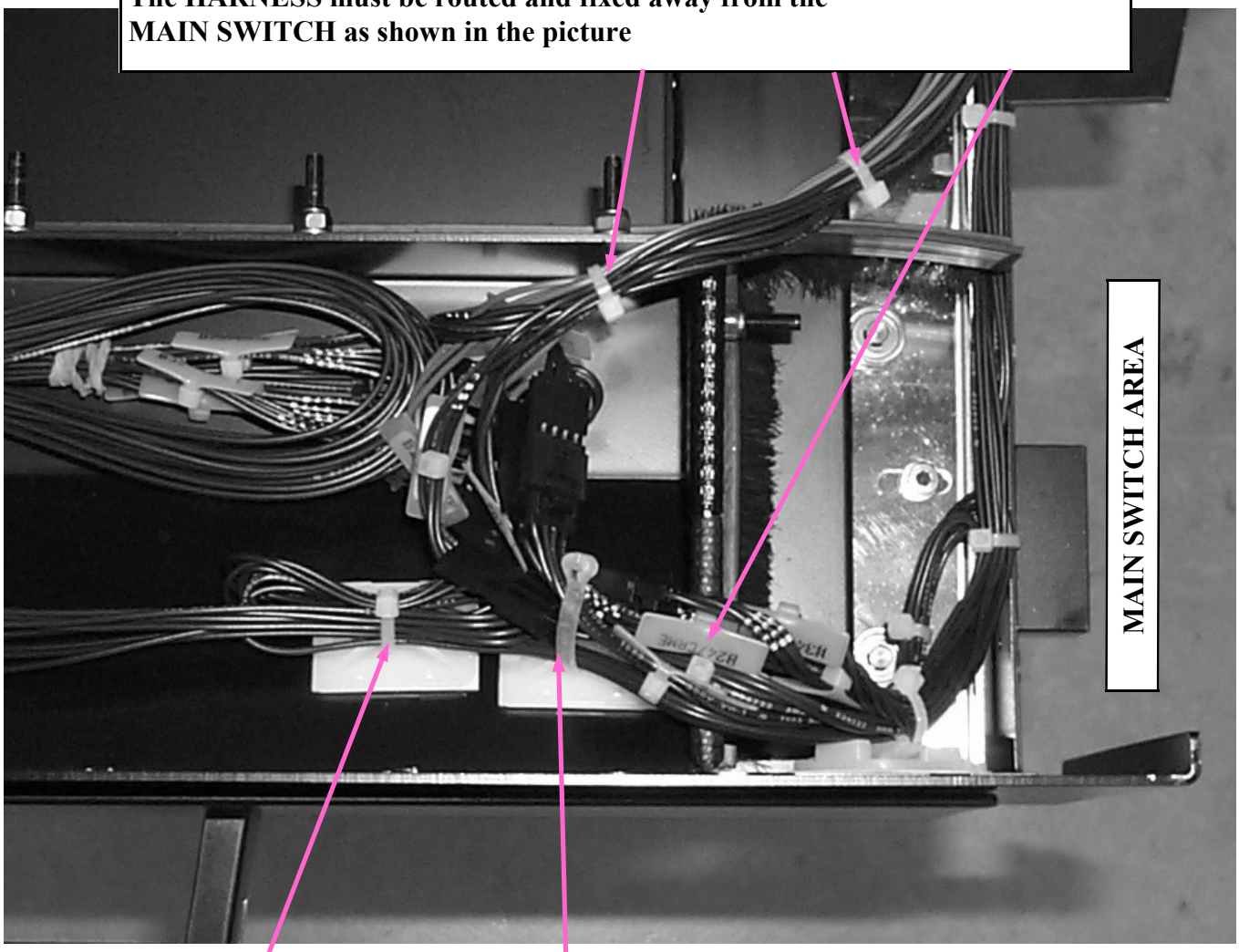
WARNING:

Following any REMOVAL of the DRAWER Assembly. The Extension Harness must be RE-LOCATED as shown BELOW.

WARNING:

Fix the HARNESS to the existing cable socket after installation.

The HARNESS must be routed and fixed away from the MAIN SWITCH as shown in the picture



Fix the HARNESS to the existing cable socket after installation.

DETAIL of Photo-cells B24 and B25 showing path of Infra-red beam

ADJUSTMENTS of Photo-cells

18. For any adjustment of the PHOTO-CELLS B24 or B25 it will be necessary to remove the DRAWER ASSEMBLY

19. Remove and retain securing screws on left hand side of Miniloader 2000, slide out drawer assembly.

    NOTE: It may be necessary to remove Cable Ties from Photo-cell EXTENSION CABLE mounted on top of LIGHT TRAP ASSEMBLY

20. Refer to ADJUSTMENT PROCEDURE in **SM 3477 6/97 page 3-48**

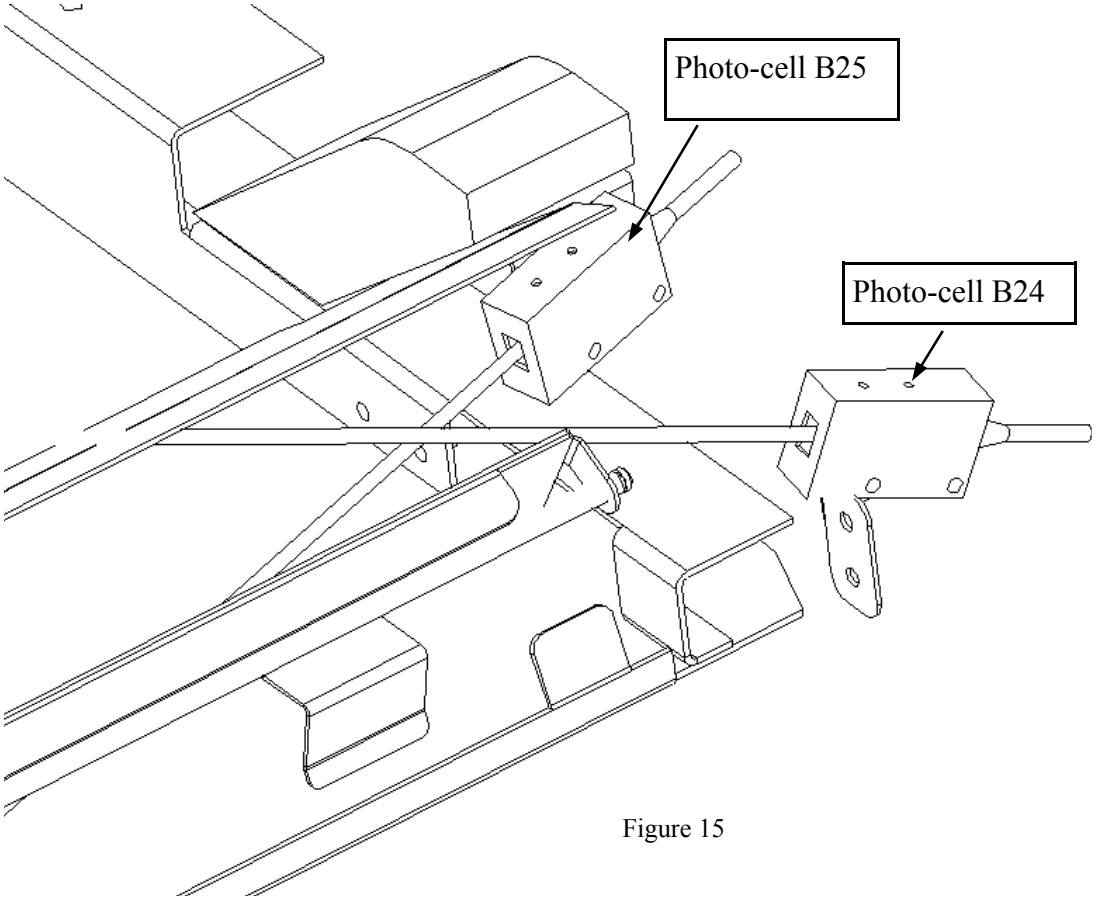


Figure 15

NOTE: A Lightweight Receive Magazine needs to be in place before adjustment is carried out

Magazine Coding PHOTO-CELLS B33, B34 and B35

21. In case of any replacement it will be necessary to remove the DRAWER ASSEMBLY as in steps 18 and 19.

DETAIL of Photo-cells: B33, B34 and B35

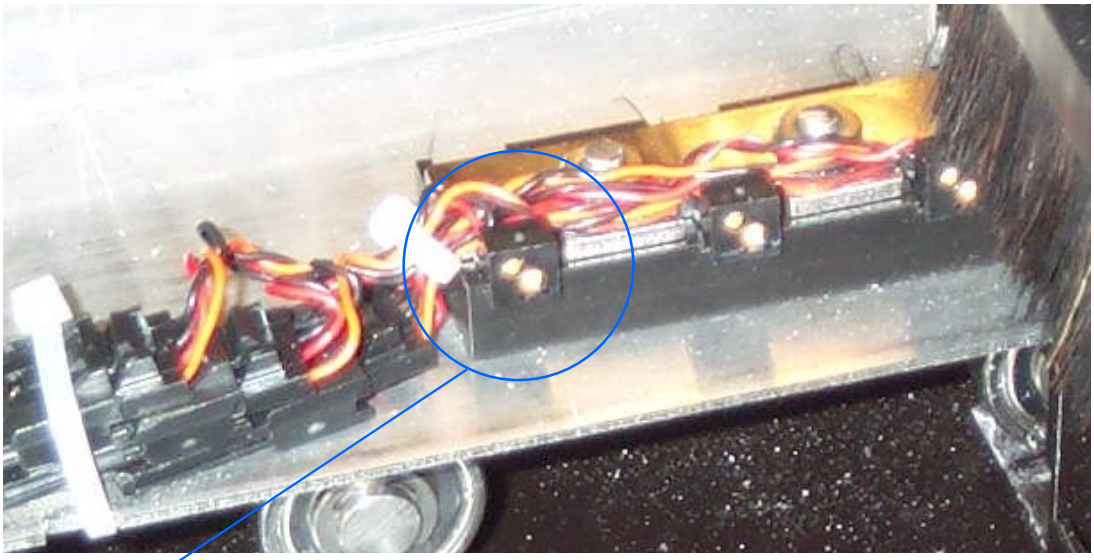


Figure 16

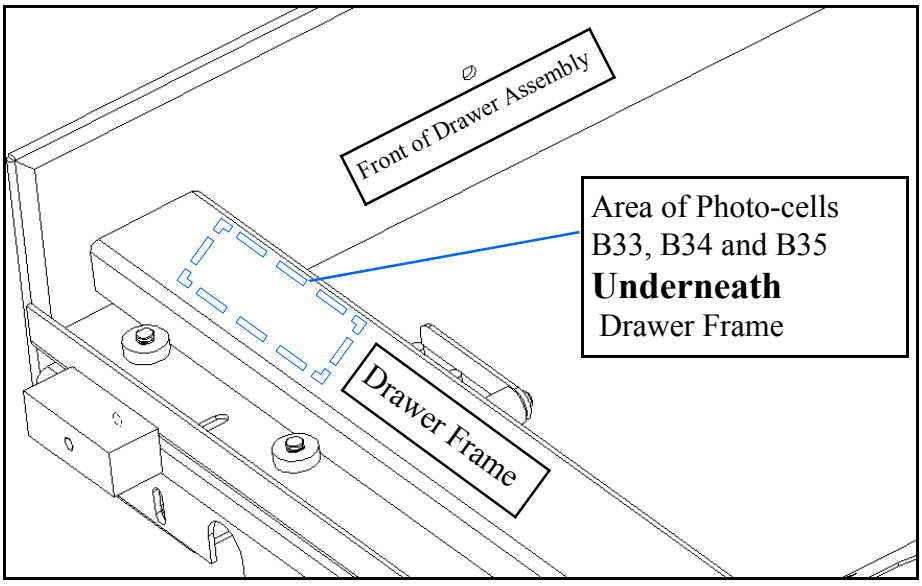


Figure 17

WARNING.
Ensure that HARNESS is left in original position following any service work.
SEE PAGE (19)

Electrical Safety

After any adjustment procedure or maintenance check the electrical safety of the final assembly, use a Safety Tester to check the following:

a.) Ground resistance test <0.1 Ohm between the power cord ground conductor and the following components:

- all metal parts of the Drawer Assembly

b.) Insulation resistance test > 2 MOhm

Ensure that all panels are reliably grounded and correctly mounted

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